WHAT IS CLAIMED IS:

1. A method of communicating between first and second stations, including the steps of:

providing at the first station a preamble including reverse link parameters individual to the first station and providing data after the preamble,

transmitting the preamble and the data from the first station to the second station,

receiving the preamble and the data at the second station and recovering the data at the second station,

providing a preamble and data at the second station, the preamble including forward link parameters in accordance with the reverse link parameters received at the second station from the first station, and

transmitting the preamble and data from the second station to the first station.

2. A method as set forth in claim 1, including the steps of:

receiving at the first station the preamble and data from the second station and recovering the data at the first station in accordance with the forward link parameters in the preamble from the second station.

3. A method as set forth in claim 2, including the steps of:

providing an additional preamble and additional data at the first station, the additional preamble including reverse link parameters individual to the first station and the data constituting new data individual to the first station, and

transmitting the additional preamble and the additional data to the second station.

4. A method as set forth in claim 3, including the steps of:

receiving at the second station the additional preamble and the additional data and recovering the additional data,

providing an additional preamble and further data at the second station, the additional preamble including additional forward link parameters in accordance with the reverse link parameters received at the second station from the first station, and

transmitting the additional preamble and the further data from the second station to the first station.

5. A method as set forth in claim 1, including the steps of:

providing a higher layer network in the preamble at the second station in place of the reverse link parameters received at the second station to constitute the forward link parameters in the additional preamble transmitted by the second station to the first station.

6. A method as set forth in claim 1, including the steps of:

providing at the second station a channel estimation from the preamble and the data received at the second station,

providing a reverse link parameters assessment in accordance with the data received at the second station and the channel estimation at the second station,

formatting a frame in accordance with the reverse link parameters assessment and the data to be transmitted and the forward link parameters, and

processing the forward link parameters and the formatted frame at the second station in accordance with the forward link parameters to provide waveforms for transmission to the first station.

7. A method of communicating between first and second stations, including the steps of:

providing at the first station a preamble including forward link parameters and reverse link parameters, both individual to the first station, and providing data after the preamble,

transmitting the preamble and the data from the first station to the second station,

receiving the preamble and the data at the second station,

recovering the data at the second station in accordance with the forward link parameters from the first station,

providing at the second station a preamble including forward link parameters in accordance with the reverse link parameters received at the second station and including reverse link parameters individual to the second station and providing data after the preamble, and

transmitting the preamble and the data from the second station to the first station.

8. A method as set forth in claim 7, including the steps of:

receiving at the first station the preamble and data from the second station and recovering the received data in accordance with the forward link parameters in the preamble,

providing at the first station an additional preamble including additional forward link parameters in accordance with the reverse link parameters received at the first station and including additional reverse link parameters individual to the first station and providing additional data after the additional preamble, and

transmitting the additional preamble and the additional data from the first station to the second station.

9. A method as set forth in claim 8, including the steps of:

receiving the additional preamble and the additional data at the second station,

recovering the additional data at the second station in accordance with the additional forward link parameters received in the additional preamble at the second station,

providing at the second station a further preamble including further forward link parameters in accordance with the additional reverse link parameters received at the second station and including further reverse link parameters individual to the second station and providing further data after the further preamble, and

transmitting the further preamble and the further data from the second station to the first station.

10. A method as set forth in claim 9, including the steps of:

receiving the further preamble and the further data at the first station, and

recovering the further data at the first station in accordance with the further reverse link parameters received in the further preamble at the first station.

11. A method as set forth in claim 7, including the steps of:

providing requirements for a higher layer network at the second station, and

providing for the adoption of the requirements for the higher layer network as the further forward link parameters in the second station.

12. A method as set forth in claim 7, including the steps of:

providing a channel estimation from the preamble and the data received at the second station,

providing an assessment of the channel estimation and the received data at the second station to determine the reverse link parameters individual to the second station.

13. A method as set forth in claim 7,

receiving at the first station the preamble and data from the second station and recovering the received data in accordance with the forward link parameters in the preamble,

providing at the first station an additional preamble including additional forward link parameters in accordance with the reverse link parameters received at the first station and including additional reverse link parameters individual to the first station and providing additional data after the additional preamble,

transmitting the additional preamble and the additional data from the first station to the second station,

providing a channel estimation from the preamble and the data received at the second station, and

providing an assessment of the channel estimation and the received data at the second station to determine the reverse link parameters individual to the second station.

14. In a method of communicating between the first and second stations, the steps of:

providing at the first station a preamble including forward link parameters and reverse link parameters,

providing data after the preamble, and

transmitting signals representing the preamble and the data in a packet to the second station.

15. In a method as set forth in claim 14 wherein a training sequence is included in the preamble.

16. In a method as set forth in claim 14 wherein

the forward link parameters include information relating to at least one of modulation type, code rate of a forward error correction and spreading factor of the signals in the packet.

17. In a method as set forth in claim 14 wherein

the reverse link parameters include information relating to at least one of modulation type, code rate of a forward error rate correction and spreading factor of signals in a preamble in a packet to be transmitted from the second station to the first station.

18. In a method as set forth in claim 14 wherein

the preamble includes a training sequence and the training sequence includes sequences for at least one of sequence synchronization, channel estimation and delay profile.

19. In a method as set forth in claim 14 wherein

the forward link parameters include information relating to at least one of modulation type, code rate of a forward error correction and spreading factor of the signals in the packet and wherein

the reverse link parameters include information relating to at least one of modulation type, code rate of a forward error rate correction and spreading factor of signals in a preamble in a packet to be transmitted from the second station to the first station and wherein

the preamble includes a training sequence and the training sequence includes a sequence of at least one of synchronization, channel estimation and delay profile.

20. A method of communicating between a first station and a second station, including the steps of:

providing for each station, in communicating with the other station, a preamble including forward link parameters and reverse link parameters,

providing data for each station to be transmitted to the other station,

providing for each station packets each including a preamble to be transmitted from the station to the other station and each including data to be transmitted after the preamble,

the forward link parameters for the preamble in each station being provided in accordance with the reverse link parameter previously transmitted to the station in a packet from the other station, and

the reverse link parameters for each preamble in each station providing an indication to the other station of the forward link parameters to be provided by the other station in the next transmission of a packet from the station to the other station.

21. A method as set forth in claim 20 wherein

each preamble to be transmitted from each station to the other station includes a training sequence.

22. A method as set forth in claim 21 wherein

each training sequence includes at least one of synchronization, channel estimation and delay profile.

23 In combination,

a first station constructed to provide a preamble including forward link parameters and reverse link parameters and including data after the preamble,

a second station displaced from the first station and constructed to provide a preamble including forward link parameters and reverse link parameters and including data after the preamble,

each of the stations being constructed to transmit its preamble and data to the other one of the stations for processing by the other one of the stations,

each of the stations being constructed to provide as its forward link parameters the reverse link parameters received by it from the other station.

24. In a combination as set forth in claim 23,

each of the stations including in the preamble a training sequence for coordinating its station with the operation of the other station.

25. In a combination as set forth in claim 23,

each of the stations including, in the forward link parameters transmitted by it to the other station, signals for facilitating the recovery by it of the data transmitted to it by the other station and for facilitating the processing by it of the recovered signals.

26. In a combination as set forth in claim 23,

a first higher layer network in the first station,

a second higher layer network in the second station,

the higher layer network in each station having a higher priority than the reverse link parameters in the other station in providing the forward link parameters for the station.

27. In a combination as set forth in claim 23,

the forward link parameters for each station including at least one type of modulation, code rate of forward error corrections and spreading factor of progressive frequencies used in transmitting successive packets of signals between the stations.

28. In a combination as set forth in claim 24,

each of the stations including, in the forward link parameters transmitted by it to the other station, signals for facilitating the recovery by it of the data transmitted to it by the other station and for facilitating the processing by it of the recovered signals,

a first higher layer network in the first station,

a second higher layer network in the second station,

the higher layer network in each station having a higher priority than the reverse link parameters in the other station in providing the forward link parameters for the station, and

the forward link parameters for each station including types of at least one of modulation, code rate of forward error corrections and spreading factor of progressive frequencies used in transmitting successive packets of signals between the stations.

29. In combination in a station for receiving data from, and transmitting data to, a second station,

a receiver in the station for receiving from the second station signals including a preamble and data after the preamble, the preamble including forward link parameters and reverse link parameters,

a preamble detector in the receiver for detecting the forward link parameters and the reverse link parameters,

a first processor responsive in the receiver to the forward link parameters for processing the data in accordance with the forward link parameters, and

a transmitter in the station,

a link adaptation controller in the transmitter for providing forward link parameters in accordance with the reverse link parameters received by the receiver from the second station, and

a second processor for processing data at the transmitter in accordance with the forward link parameters provided by the link adaptation controller to obtain signals for transmission to the second station.

30. In a combination as set forth in claim 29,

an assessor for providing reverse link parameters individual to the station, and

a frame formatter for formatting a preamble including the forward link parameters and the reverse link parameters in a preamble and for formatting the preamble and the date in packets.

31. In a combination as set forth in claim 29,

a network responsive to higher sources than the reverse link parameters for superseding the reverse link parameters in providing the forward link parameters for the transmitter.

32. In a combination as set forth in claim 30,

a channel estimator for estimating parameters to be provided in facilitating the recovery of the signals transmitted by the second station to the first station, and

the assessor being responsive to the data received from the second station and to the parameters estimated by the channel estimator for providing the reverse link parameters to the frame formatter.

33. In a combination as set forth in claim 30,

a network responsive to higher sources than the reverse link parameters for superseding the reverse link parameters in providing the forward link parameters for the transmitter,

a channel estimator for estimating parameters to be provided in facilitating the recovery at the second station of the signals transmitted by the first station to the second station, and

the assessor being responsive to the data received from the second station and to the parameters estimated by the channel estimator for providing the reverse link parameters to the frame formatter.

34. In combination in a first station for transmitting data to a second station and for receiving data from the second station,

a controller for providing forward link parameters having characteristics for facilitating the recovery by the second station of data transmitted to the second station,

an assessor for providing reverse link parameters individual to the first station in facilitating the recovery by the second station of data from the first station and in facilitating the processing of the recovered data by the second station,

a formatter responsive to the forward link parameters, the reverse link parameters and the data to be transmitted to the second station for formatting the forward link parameters the reverse link parameters and the data into packets, and

a processor for processing the data in the packets in accordance with the forward link parameters to provide signals for transmission to the second station.

35. In a combination as set forth in claim 34,

an estimator for estimating parameters for facilitating the recovery at the station of the signals received at the second station from the first station,

the assessor being responsive to the parameters estimated by the estimator for providing the reverse link parameters.